



# Preparing



## for



## 5<sup>th</sup>



## Grade

# Parsons ES



## Multiplying Decimals

Step 1: Multiply as you would with whole numbers.

Step 2: Count the number of decimal places.

Step 3: Move the decimal point to the left the same number of places.

Ex.  $5.34$   
 $\begin{array}{r} \text{X } 12 \\ \hline 1068 \\ +5340 \\ \hline 64.08 \end{array}$

Find the product (answer) to the multiplication problems below.

1.  $9.44$   
 $\begin{array}{r} \text{x } 5 \\ \hline \end{array}$

2.  $17.6$   
 $\begin{array}{r} \text{x } 3.3 \\ \hline \end{array}$

3.  $4.23$   
 $\begin{array}{r} \text{x } 6 \\ \hline \end{array}$

4.  $9.1$   
 $\begin{array}{r} \text{x } 8 \\ \hline \end{array}$

5.  $0.34$   
 $\begin{array}{r} \text{x } 2.1 \\ \hline \end{array}$

6.  $7.07$   
 $\begin{array}{r} \text{x } 43 \\ \hline \end{array}$

7.  $8.12$   
 $\begin{array}{r} \text{x } 4 \\ \hline \end{array}$

8.  $586$   
 $\begin{array}{r} \text{x } 1.7 \\ \hline \end{array}$

9.  $54.9$   
 $\begin{array}{r} \text{x } 3.1 \\ \hline \end{array}$

10.  $5.22$   
 $\begin{array}{r} \text{x } 3.2 \\ \hline \end{array}$

11.  $6.04$   
 $\begin{array}{r} \text{x } 0.1 \\ \hline \end{array}$

12.  $55.2$   
 $\begin{array}{r} \text{x } 7 \\ \hline \end{array}$

13.  $4.4 \times 32 = y$

14.  $32 \times 7.1 = y$

15.  $12.2 \times 1.1 = y$



## Adding and Subtracting Decimals

When you add decimal numbers you must line up the decimal points. Attach zeroes if necessary and then add.

Ex.  $8.563 + 7.8 = x$

$$\begin{array}{r} 8.56 \\ + 7.80 \\ \hline 16.36 \end{array}$$

Find the sum.

1.  $4.23 + 5.11$

6.  $11 + 0.45$

2.  $9.33 + 2.40$

7.  $28.5 + 34.12$

3.  $66.34 + 5.23$

8.  $6.73 + 12.02$

4.  $12 + 6.78$

9.  $8.45 + 3.72$

5.  $7.3 + 3.56$

10.  $0.47 + 3.1 + 8.6$

When you subtract decimal numbers you must line up the decimal points. Attach zeroes and decimal points if necessary. Then subtract.

Ex.  $11 - 0.023$

$$\begin{array}{r} 11.00 \\ - 0.02 \\ \hline 10.98 \end{array}$$

Find the difference.

1.  $24.4 - 21.2$

5.  $0.59 - 0.3$

9.  $4.3 - 3.6$

2.  $16.3 - 3.92$

6.  $4.12 - 1.85$

10.  $20.56 - 0.01$

3.  $12 - 0.06$

7.  $3.15 - 1.99$

4.  $6.90 - 4.60$

8.  $1.5 - 0.4$



## Changing Fractions to Decimals and Decimals to Fractions

Change the following fractions to decimal numbers.

Ex.  $\frac{15}{100} = 0.15$

1.  $\frac{23}{100}$

6.  $\frac{25}{100}$

2.  $\frac{62}{100}$

7.  $\frac{99}{100}$

3.  $\frac{50}{100}$

8.  $\frac{11}{100}$

4.  $\frac{17}{100}$

9.  $\frac{70}{100}$

5.  $\frac{4}{100}$

10.  $\frac{8}{100}$

Change the following decimal numbers to fractions.

Ex.  $0.12 = \frac{12}{100}$

1. 0.22

6. 2.9

2. 0.35

7. 0.06

3. 0.29

8. 0.07

4. 0.37

9. 0.03

5. 1.53

10. 8.60



## Expressions and Variables

An expression is a mathematical phrase that combines numbers, operation signs, and sometimes variables. It does not have an equal sign or an equality symbol. Ex.  $12 + 3$        $8 - 4$        $2 \times 9$        $(7 + 6) - 5$

A variable is a letter or symbol that stands for one or more numbers. These are some expressions with a variable.

Ex.  $5 + n$        $g - 7$        $8 \times a$        $(4 + x) - 2$

Review the examples below where 5 is substituted for a.

| <u>Problem</u>    | <u>Calculation</u>                   | <u>Solution</u> |
|-------------------|--------------------------------------|-----------------|
| 1. $a + 6$        | Simply replace the a with 5. $5 + 6$ | 11              |
| 2. $14 - a$       | $14 - 5$                             | 9               |
| 3. $\frac{30}{a}$ | This means divide. $30 \div 5$       | 6               |

In the following problems, let  $y = 8$ . Solve the problems.

1.  $y + 5 =$       2.  $y \div 2 =$       3.  $16 - y$       4.  $4 + y =$

In the following problems, let  $t = 7$ . Solve the problems.

1.  $t - 2 =$       2.  $(2 \times t) + 5 =$       3.  $t + 4 =$       4.  $\frac{21}{t}$

In the following problems  $b = 2$ ,  $c = 5$ , and  $k = 10$ . Solve the problems.

1.  $k - b =$       2.  $c + k =$       3.  $(5 \times b) + c =$       4.  $(6 \times c) - k =$

5.  $b \times c =$       6.  $10 + b =$       7.  $k - 2 =$       8.  $b + k =$



# Factors

A factor is a number multiplied by another number to find a product. The product is the answer in multiplication.

2 is a factor of 4 because  $2 \times 2 = 4$                       4 is the product

3 and 2 are factors of 6 because  $3 \times 2 = 6$                       6 is the product

Ex. How many ways can we multiply 2 whole numbers to equal the product 24?

| Factor |   | Factor |   | Product |
|--------|---|--------|---|---------|
| 1      | x | 24     | = | 24      |
| 2      | x | 12     | = | 24      |
| 3      | x | 8      | = | 24      |
| 4      | x | 6      | = | 24      |
| 6      | x | 4      | = | 24      |
| 8      | x | 3      | = | 24      |
| 12     | x | 2      | = | 24      |
| 24     | x | 1      | = | 24      |

Without duplicating the numbers listed above, we have 1, 2, 3, 4, 6, 8, 12, and 24. These numbers are **factors** of 24.

List all the factors for the numbers below.

- |        |        |         |
|--------|--------|---------|
| 1. 15  | 6. 44  | 11. 52  |
| 2. 6   | 7. 11  | 12. 4   |
| 3. 14  | 8. 99  | 13. 172 |
| 4. 32  | 9. 63  | 14. 27  |
| 5. 100 | 10. 10 | 15. 45  |



# Mathematics Practice

|                                                                                           |                                                                                    |                                                                                           |                                                                                                                                                  |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| $5764 - 245 =$                                                                            | $\begin{array}{r} 260 \\ - 171 \\ \hline \end{array}$                              | $23 \times 3000 =$                                                                        | $945 \div 5 =$                                                                                                                                   |
| $376 \div 8 =$                                                                            | $764 \times 8 =$                                                                   | Write $\frac{25}{100}$ as a decimal fraction.                                             | Write 0.75 as a fraction in simplest form.                                                                                                       |
| What is the value of $16.34 - n$ if $n$ is 8.3?                                           | What are the odd numbers between 9 and 30?                                         | Compare. Write $<$ , $>$ , or $=$ for $\square$ .<br><br>$18,276 \square 18,287$          | Find the sum.<br><br>$\begin{array}{r} \$568 \\ + \$446 \\ \hline \end{array}$                                                                   |
| Find the difference.<br><br>$\begin{array}{r} \$7,597 \\ - \$2,132 \\ \hline \end{array}$ | Find the product.<br><br>$\begin{array}{r} 621 \\ \times 45 \\ \hline \end{array}$ | Find the quotient.<br><br>$963 \div 9 =$                                                  | Draw a circle around the divisor and a square around the dividend in the equation below.<br><br>$124 \div 4 = 31$                                |
| $\begin{array}{r} 420,000 \\ - 230,000 \\ \hline \end{array}$                             | What is the value of $(12 + n) - 24$ if $n$ is 25?                                 | Which number is forty-eight thousandths?<br>A. 0.048<br>B. 0.480<br>C. 4.800<br>D. 48,000 | Sue has $m$ marbles. She buys a bag of 12 marbles. Which expression shows how many marbles she has?<br>A. $m - 12$<br>B. $m + 12$<br>C. $12 + 5$ |



# Mathematics Practice

## Grade 5

Name \_\_\_\_\_

Date \_\_\_\_\_

|                    |                     |                                           |                  |
|--------------------|---------------------|-------------------------------------------|------------------|
| $420 + 70 =$       | $\$33.04 + 0.8 =$   | $60 \times 3000 =$                        | $530 \div 2 =$   |
| $650 \times 0.5 =$ | $5.87 \times 3.2 =$ | $69.81 + 3.2 =$                           | $1.8 - 0.6 =$    |
| $8.3 - 4.7 =$      | $8.6 + 4.5 =$       | $65 \div 5 =$                             | $18 + 26 + 33 =$ |
| $495 - 366 =$      | $75 \times 7 =$     | $7.16 - 0.2 =$                            | $545 \times 4 =$ |
| $66 \times 54 =$   | $2.47 + 0.6 =$      | Write $\frac{8}{10}$<br>in simplest form. | $14.6 - 12.3 =$  |

# Measurement

1 yard = 3 feet = 36 inches

1 foot = 12 inches

1 pound = 16 ounces

1 gallon = 4 quarts

1 quart = 4 cups = 2 pints

1 pint = 2 cups = 16 ounces

1 cup = 8 ounces

Using the information above, fill in the blanks below.

1. 32 ounces = \_\_\_\_\_ pound(s)

2. 36 inches = \_\_\_\_\_ yard(s)

3. 2 yards = \_\_\_\_\_ inches

4. 3 yards = \_\_\_\_\_ feet

5. 5 pints = \_\_\_\_\_ cup(s)

6. 2 gallons = \_\_\_\_\_ quart(s)

7. 1 gallon = \_\_\_\_\_ quart(s)

8. 1 pint = \_\_\_\_\_ ounce(s)

9. 60 inches = \_\_\_\_\_ feet

10. 1 quart = \_\_\_\_\_ ounces

11. 2 quarts = \_\_\_\_\_ gallon(s)

12. 3 pints = \_\_\_\_\_ ounce(s)

13. 1 quart = \_\_\_\_\_ cups

14. 18 inches = \_\_\_\_\_ feet

15. 5 cups = \_\_\_\_\_ pints

16. 1 pound = \_\_\_\_\_ ounces

17. 3 gallons = \_\_\_\_\_ pint(s)

18. 6 cups = \_\_\_\_\_ quarts

19. 1 cup = \_\_\_\_\_ ounce(s)

20. 1 foot = \_\_\_\_\_ inches

21. 1 yard = \_\_\_\_\_ inches

22. 6 feet = \_\_\_\_\_ yards

23. 2 pounds = \_\_\_\_\_ ounces

24. 3 cups = \_\_\_\_\_ ounces

25. 7 feet = \_\_\_\_\_ inches

26. 2  $\frac{1}{2}$  pounds = \_\_\_\_\_ ounces

27. 1  $\frac{1}{2}$  feet = \_\_\_\_\_ inches

28. 6 quarts = \_\_\_\_\_ gallons



# Multiples

The multiple of a whole number is any whole number that is the product of the given number and another whole number. To find the multiple of any whole number, multiply that whole number by 1, then 2, 3, 4, 5, etc.

For example, to find multiples for the number 6, multiply the number 6 by 1, 2, 3, 4, 5, etc. The products 6, 12, 18, 24, and 30 are all **multiples** of 6.

Ex. Find multiples of 3.

Multiply 3 by 1, 2, 3, 4, 5, etc.

$$3 \times 1 = 3$$

$$3 \times 2 = 6$$

$$3 \times 3 = 9$$

$$3 \times 4 = 12$$

$$3 \times 5 = 15$$

The products above are: 3, 6, 9, 12, 15

Therefore, the first five multiples of 3 are 3, 6, 9, 12, and 15.

Ex. Is 49 a multiple of 7?

Multiply 7 by 1, 2, 3, 4, 5, etc. until we get to 49.

$$7 \times 1 = 7$$

$$7 \times 2 = 14$$

$$7 \times 3 = 21$$

$$7 \times 4 = 28$$

$$7 \times 5 = 35$$

$$7 \times 6 = 42$$

$$7 \times 7 = 49 \quad \text{STOP}$$

Looking at these multiples of 7, we see that  $7 \times 7 = 49$ , so 49 is a multiple of 7.

List the first 5 multiples of the numbers below.

1. 4

2. 10

3. 8

4. 9

5. 2

6. 5

Which of the numbers below are multiples of 6?

1. 24

2. 66

3. 6

4. 23

5. 35

6. 48



## Simplifying Fractions

To simplify a fraction means to write a fraction so that the numerator and denominator have only 1 as their common factor.

Ex. Reduce  $\frac{4}{8}$  to lowest terms.

Step 1: Find the greatest common factor of 4 and 8. Think: What is the largest number that can be divided into 4 and 8 without a remainder? 4 and 8 can both be divided by 4.

Step 2: Divide the top and bottom of the fraction by the same number.

$$\frac{4 \div 4}{8 \div 4} = \frac{1}{2} \quad \text{Therefore, } \frac{4}{8} = \frac{1}{2}$$

Simplify the following fractions.

1.  $\frac{4}{8}$

2.  $\frac{12}{36}$

3.  $\frac{2}{8}$

4.  $\frac{8}{18}$

5.  $\frac{15}{30}$

6.  $\frac{3}{6}$

7.  $\frac{2}{6}$

8.  $\frac{3}{6}$

9.  $\frac{5}{10}$

10.  $\frac{4}{12}$

11.  $\frac{6}{8}$

12.  $\frac{8}{24}$

13.  $\frac{8}{20}$

14.  $\frac{4}{10}$

15.  $\frac{12}{15}$

16.  $\frac{50}{100}$

17.  $\frac{14}{21}$

18.  $\frac{16}{64}$

19.  $\frac{9}{21}$

20.  $\frac{3}{12}$

